MA4ZD14

Silicon epitaxial planar type

For high speed switching

■ Features

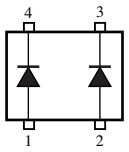
- Two isolated elements are contained in one package, allowing high-density mounting
- Low forward voltage: $V_F < 0.40$ V

■ Package

- Code
  SMini4-F1
- Pin Name
  1: Anode 1 3: Cathode 2
  2: Anode 2 4: Cathode 1

■ Marking Symbol: M5D

■ Internal Connection



■ Absolute Maximum Ratings $T_a = 25°C$

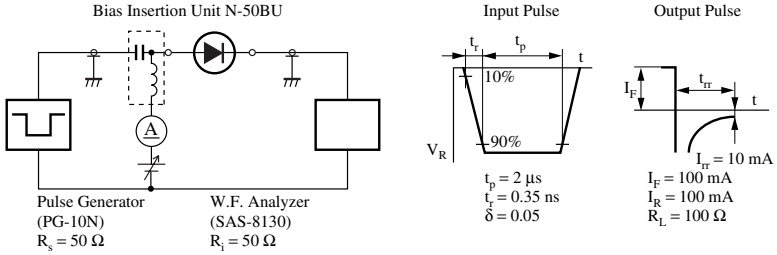
Parameter		Symbol	Rating	Unit
Reverse voltage		V_R	20	V
Repetitive peak reverse-voltage		V_{RRM}	20	V
Forward current	Single	I_F	100	mA
	Double *1		75	
Peak forward current	Single	I_{FM}	300	mA
	Double *1		225	
Non-repetitive peak forward surge current *2	Single	I_{FSM}	1	A
	Double *1		0.75	
Junction temperature		T_j	125	°C
Storage temperature		T_{stg}	−55 to +125	°C

Note) ∗1: Value of each diode in double diodes used.
∗2: The peak-to-peak value in one cycle of 50 Hz sine wave (non-repetitive)

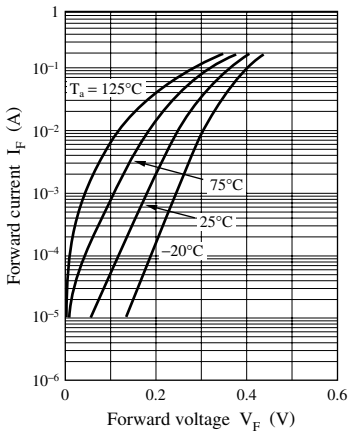
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current	I_R	$V_R = 10$ V			20	μA
Forward voltage	V_{F1}	$I_F = 5$ mA			0.27	V
	V_{F2}	$I_F = 100$ mA			0.40	
Terminal capacitance	C_t	$V_R = 0$ V, f = 1 MHz		25		pF
Reverse recovery time *	t_{rr}	$I_F = I_R = 100$ mA $I_{rr} = 10$ mA, $R_L = 100$ Ω		3		ns

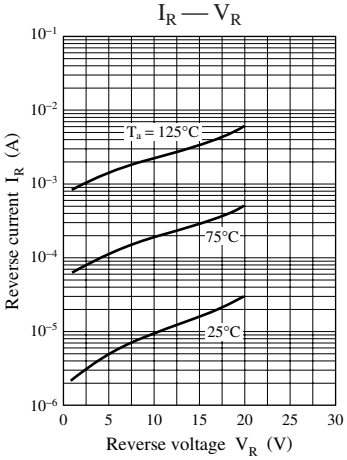
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3. Absolute frequency of input and output is 250 MHz. 4.∗: t_{rr} measurement circuit



I_F — V_F


1
10⁻¹
10⁻²
10⁻³
10⁻⁴
10⁻⁵
10⁻⁶
Forward current I_F (A)
T_a = 125°C
75°C
25°C
−20°C
0
0.2
0.4
0.6
Forward voltage V_F (V)

I_R — V_R


10⁻¹
10⁻²
10⁻³
10⁻⁴
10⁻⁵
10⁻⁶
Reverse current I_R (A)
T_a = 125°C
75°C
25°C
0
5
10
15
20
25
30
Reverse voltage V_R (V)

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